REMARKS

The Examiner rejected Claims 8 and 15 under 35 U.S.C. 102(b) as being anticipated by Sherriff, *et al* (hereafter "Sherriff") (GB 2 247 938). The above amendments cancel Claim 15, and hence, render its rejection moot. Applicant traverses the rejection of Claim 8.

With regard to Claim 8, the Examiner identifies "click" switches 69 as the user sensor that detects a change in capacitance associated with an electrode on said puck. Applicant disagrees with the Examiner's view of these switches. Sheriff teaches (page 10, lines 25-29) that these switches respond to the user by causing a connection to be made from a conductive lead connected to the puck supply to a capacitor, supplying an electrical charge to that capacitor. That is, when the user presses a button, a charge is deposited on one plate 72 of a capacitor having a fixed capacitance. The charge displaced from the underlying plate 76 is then detected. There is no teaching that the capacitance of the capacitor changes during this operation. Hence, Applicant submits that Claim 8 is not anticipated by Sherriff.

The Examiner rejected Claim 19 under 35 U.S.C. 102(e) as being anticipated by Maatta, *et al* (hereafter "Maatta") (US 6,762,748). Applicant submits that Claim 19 as currently amended is not anticipated by Maatta.

Claim 19 requires that the position detector comprises surface electrodes on the surface and a puck electrode, and that the device measures the capacitance between selected ones of those electrodes to determine the puck position. Maatta does not teach this type of position detector. Hence, Applicant submits that Claim 19 is not anticipated by Maatta.

The Examiner rejected Claim 4 under 35 U.S.C. 103(a) as being unpatentable over Maatta in view of Sherriff. Applicant submits that Claim 4 as currently amended is not obvious in view of the cited prior art.

Claim 4 requires that the user sensor detects a change in capacitance associated with an electrode on the puck as an indication of a user interaction, and that the position detector

measures the capacitance between electrodes to determine puck position. Neither Maatta nor Sherriff teach these limitations.

Moreover, Applicant submits that there would be significant advantages in terms of design and manufacturing simplicity, compactness, and cost obtained by using capacitance measurement as the basis for both the user sensor and the position detector, since the same capacitance measuring circuit can be used for both functions. Other advantages to capacitive sensing mechanisms described in the Specification of the current invention (page 10, lines 15-18) include low power consumption, immunity to surface dirt accumulation, and avoiding wear between moving parts.

The device taught by Maatta uses expensive Hall sensors for position detection. In addition to the higher cost, the accuracy of these sensors for determining position is less than that provided by capacitance measurements. Element 41 in Sherriff, identified by the Examiner as a user sensor, would have no utility in determining z-position in the device taught by Maatta, as the puck in Matta is constrained to move in the x-y plane by magnetic forces between the puck and the underlying surface. Hence, Applicant submits that there would be no advantage in modifying the device of Maatta by adding the switch taught by Sherriff.

Accordingly, Applicant submits that Claim 4 is not obvious in view of Maatta and Sherriff.

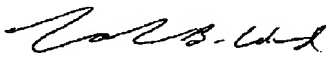
The Examiner rejected Claim 16 under 35 U.S.C. 103(a) as being unpatentable over Sherriff in view of Yoshikawa, *et al* (hereafter "Yoshikawa")(US 5,815,139). Applicant traverses the rejection.

With regard to Claim 16, the Examiner states that Sherriff does not disclose that the position detector measures current flowing between selected ones of the electrodes. The Examiner looks to Yoshikawa for the missing teachings. Applicant disagrees with the Examiner's reading of Yoshikawa.

The passage cited by the Examiner (col. 6, lines 28-67) describes a means of measuring the potential difference across a reference resistor and the contact resistance of interest. It states first that "the same current i_t will flow through" these resistances within a small tolerance (line 35-38) and later that the calculation of the contact resistance value "is not affected by the current that flows" (lines 54-55) in one mode of operation. In either case, the system taught by Yoshikawa is clearly not measuring the current flowing between electrodes, as required by Claim 16. Hence, Applicant submits that the Examiner has failed to make a *prima facie* case for obviousness with respect to Claim 16.

I hereby certify that this paper is being sent by FAX to 571-273-8300.

Respectfully Submitted,



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